14155

Vetronics Technology Integration

INTERACTIVE TOUCH SCREEN

OBSTACLE DETECTION

DISPLAY SUITE

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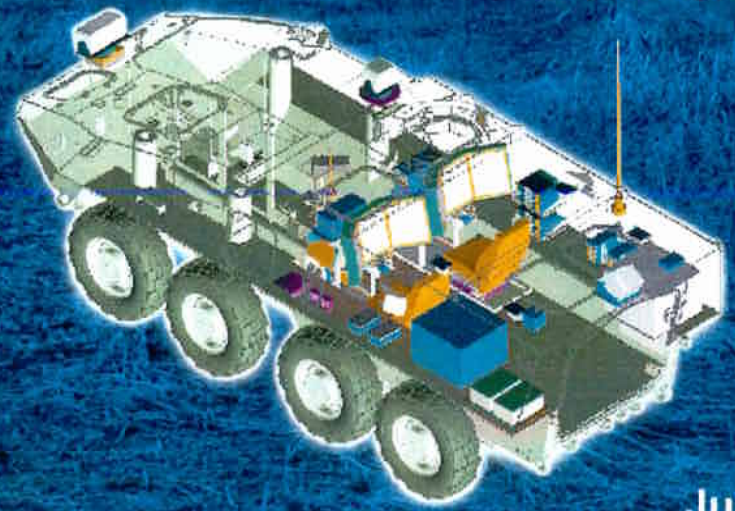

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Standard Form 298 (Rev. 8-98)
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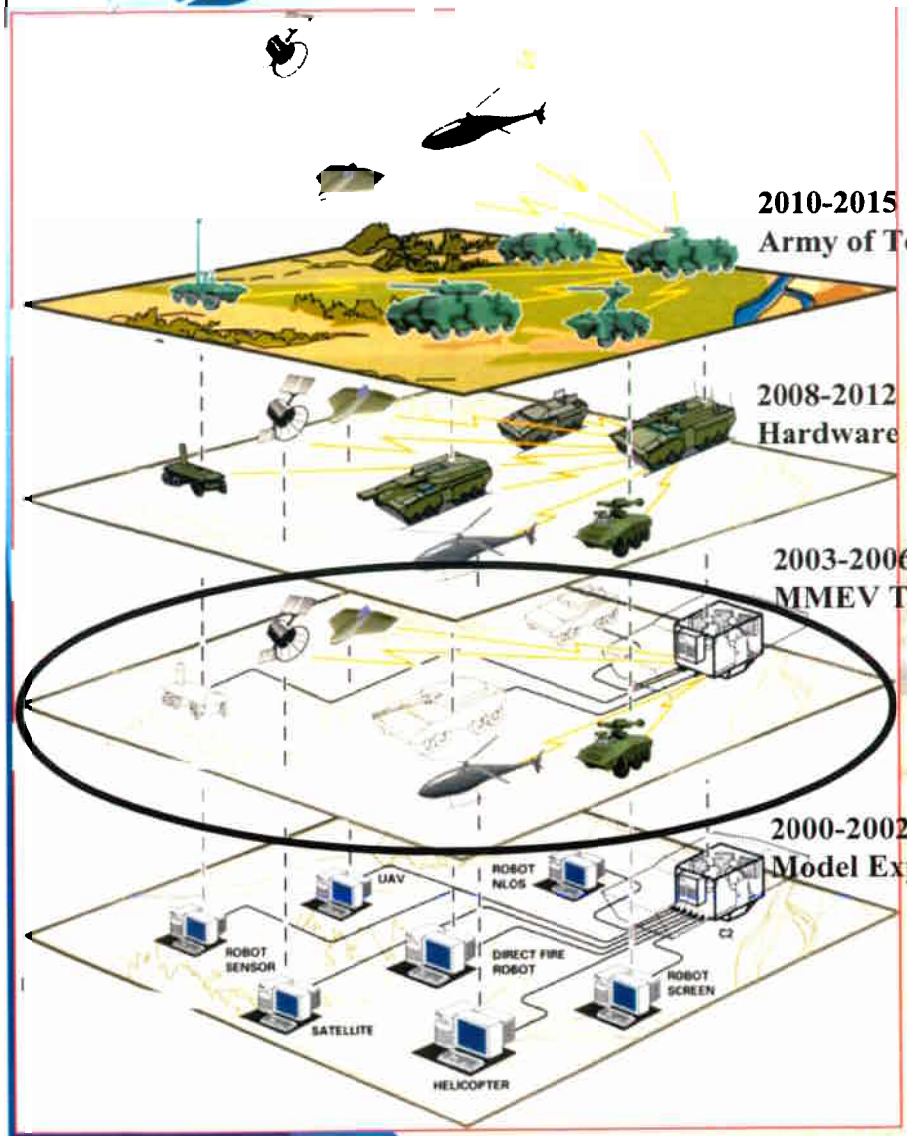
Leggat/Andrews Summit April 2002

- Project teams directed to collaborate

MMEV TDP Project

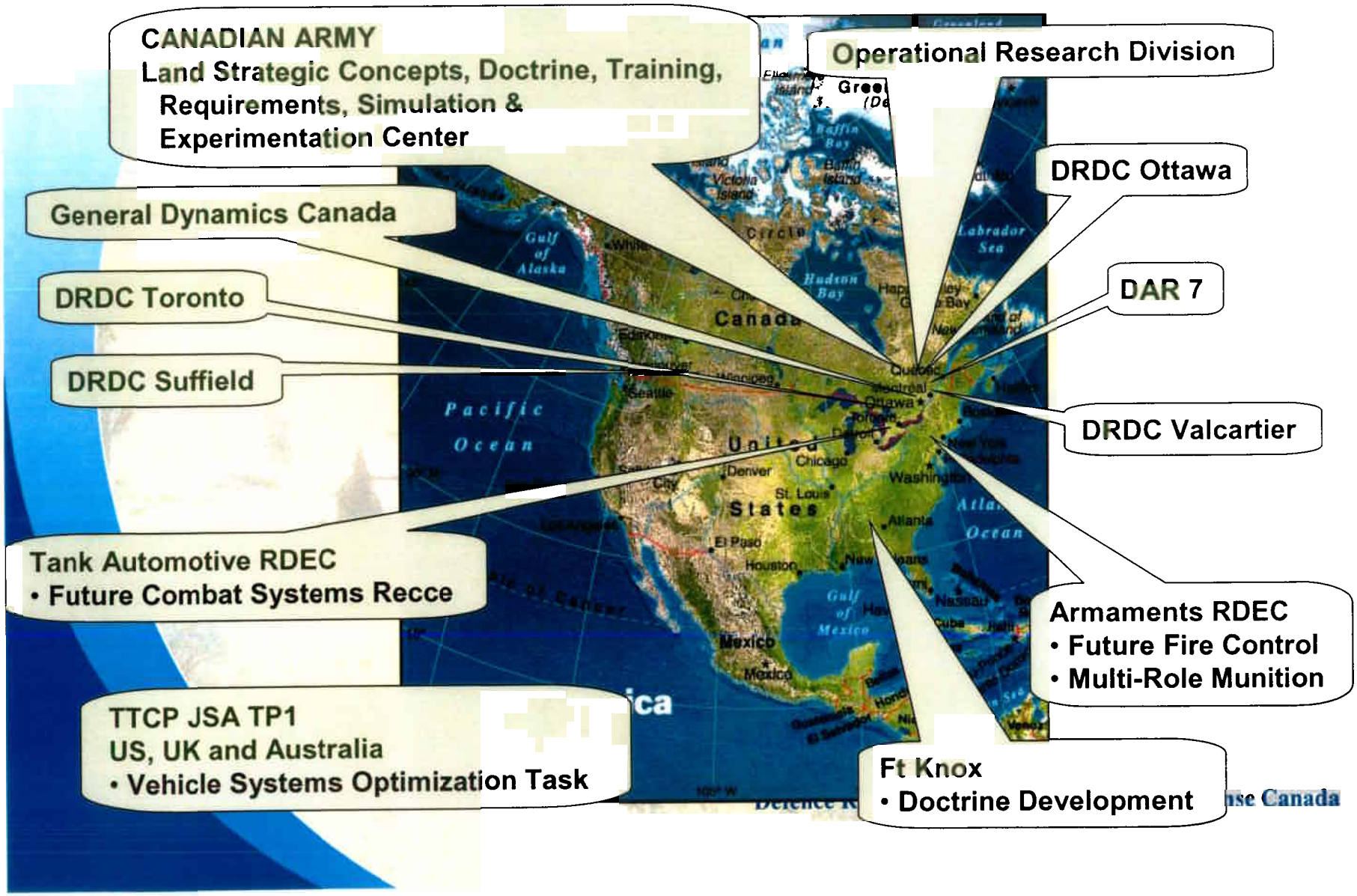


- Core Capabilities
  - Immersive displays with SA Aids, ATR, DAS, Adaptive Camo
  - Multi-Mission Weapon System Direct, Indirect, BLOS and Air Defence
  - Unmanned Ground & Air Vehicles
- Evaluations of Candidate Technologies & Experiments:
  - Crew Performance
  - Joint Operations
  - Coalition Operations with TARDEC and ARDEC

MMEV Goals

- Predict battlefield effectiveness of Multi-Mission capability in Complex and Open Terrain
- Assess ability of a two and three-man crew to operate an MMEV
- Determine effectiveness of individual technologies
- Refine the Future Army model (Future Army Model Experiment 3)
- Identify cost, schedule, and risk drivers
- Explore interoperability issues and technological implications of the Future Combat Systems project

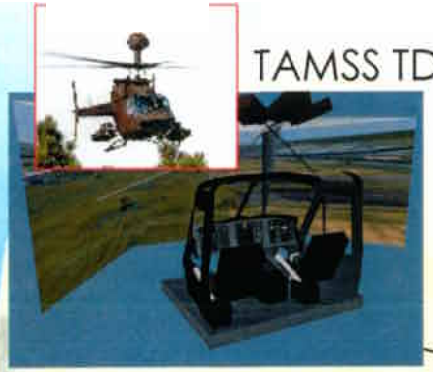
Direct MMEV Participants



MMEV HLA Build 3 Federation

TARDEC UCD

ALERT TDP



TAMSS TDP

ALS Simulation

SIHS TDP

AEC & SEBA UAVs

AVTB

AEC Battle Lab

TARDEC Data Exchange Agreement with Canada

Overview

- TARDEC entered Soldier-Machine Interface Data Exchange Agreement with Canada in 2002
- Each group has unique approach to SMI development
- Evaluation of unique features would further each countries development

FY03-04

- Comparison of CAT with Multi-Mission Effects Vehicle (MMEV)
- Build relevant scenarios/doctrine
- Integrate and execute scenarios

UAMBL Fort Knox Assistance

- Provided evaluation on Canadian scenario coalition doctrine
  (Scouting/engagement mission, handoff of targets, route adjustment for robots)
- Provide Soldier CAT crew for experiments
  (4 soldiers for 3 weeks in Ottawa, January, 2004)

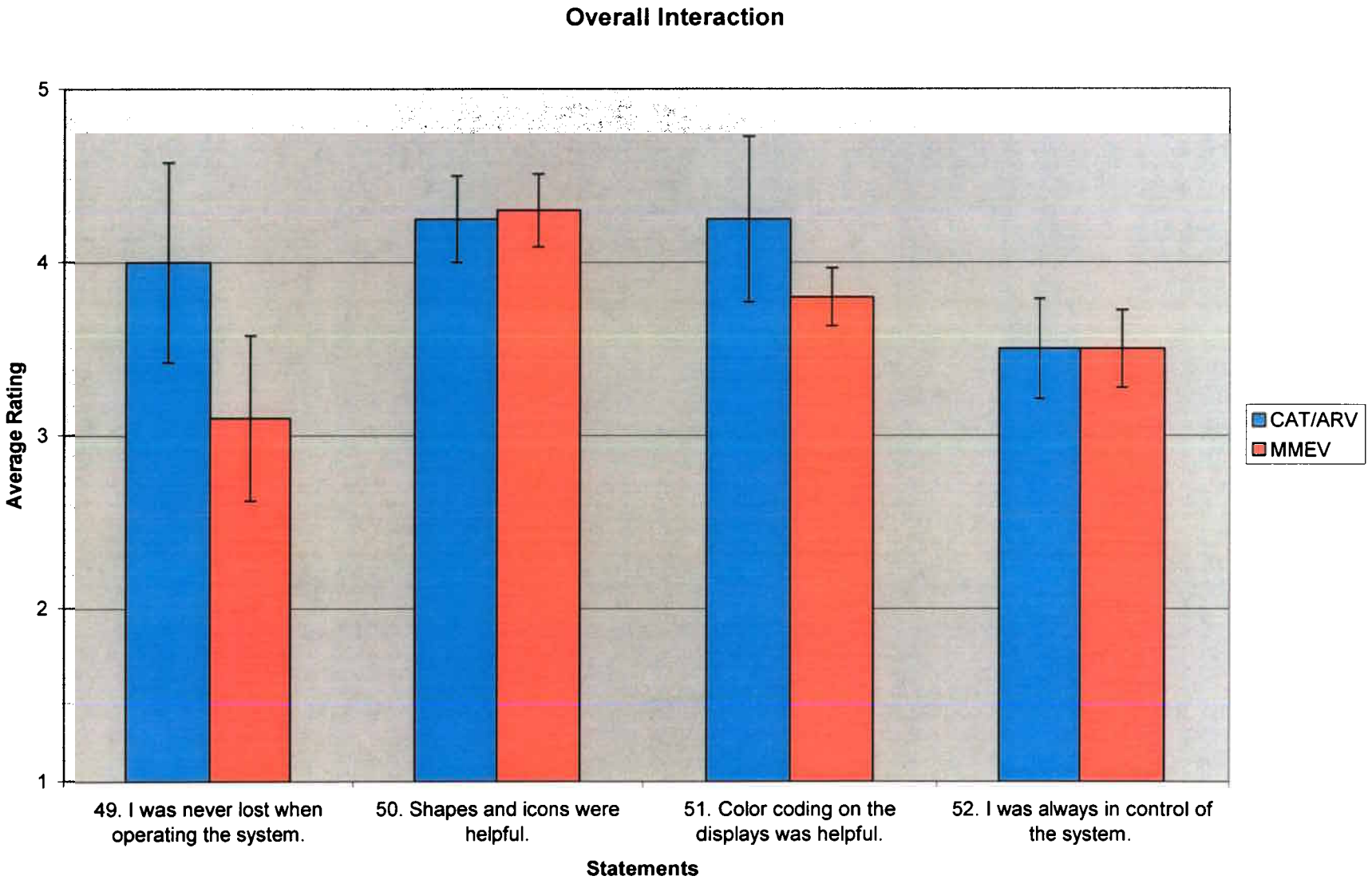
TARDEC Phase I Objectives

- Begin to address joint coalition support between US and Canadian troops
- Evaluate target handoffs from CAT/ARV and Canadian MMEV
- Engage targets from handoff
- Evaluate the integration and interoperation of Canadian UGVs and ARVs
- Evaluate interoperation with Canadian Helicopters, air support is used to:
    1. Help position ARVs on the battlefield
    2. Detect targets and direct ARVs into the target area
- Evaluate the CAT/MMEV ability to work collaboratively
- Compare the performance of the MMEV SMI against CAT SMI

Canadian Phase I Objectives

- Evaluate MMEV ability to receive direct and indirect fire targets from US forward observers and then engage those targets.
- Evaluate integration and interoperation of a Canadian unit working along side an US unit with forward placed ARVs.
  - Ability to navigate and place the unmanned systems
  - Battlefield combat identification
  - Detection of targets
- Evaluate MMEV ability to work collaboratively with the US CAT vehicle.
- Compare the performance of the MMEV WMI with the CAT WMI.
- Explore command relationships between both countries.
- Address coalition support between US and Canadian troops.

TARDEC Phase I Results



MMEV Phase II Objectives

- Explore 'network centric' operational concepts
  - System performance
  - Individual and crew workload
  - Situational awareness
- Evaluate the ability to interact with UAVs and UGVs
  - Effectiveness of unmanned sensor information
  - Evaluate tactics, techniques, and procedures
- Evaluate Operator-Machine Interfaces
- Evaluate in urban terrain and in Operations Other Than War
- Enhance distributed simulation experiments with coalition forces